

10/629/73

1 METHOD OF FABRICATING LONG-WAVELENGTH VCSEL  
2 AND APPARATUS

3  
4 A17  
5 Field of the Invention

6  
7 This invention relates to a method of fabricating a vertical  
8 cavity surface emitting laser which is capable of emitting long-  
9 wavelength light and to the vertical cavity surface emitting  
10 laser.

11  
12  
13 Background of the Invention

14  
15 Vertical cavity surface emitting lasers (VCSELs) include  
16 first and second distributed Bragg reflectors (DBRs) formed on  
17 opposite sides of an active area. The VCSEL can be driven or  
18 pumped electrically by forcing current through the active area or  
19 optically by supplying light of a desired frequency to the active  
20 area. Typically, DBRs or mirror stacks are formed of a material  
21 system generally consisting of two materials having different  
22 indices of refraction and being easily lattice matched to the  
23 other portions of the VCSEL. In conventional VCSELs,  
24 conventional material systems perform adequately.

